

REMARKS

I Disposition of Claims

Claims 1, 2, 4, and 5-9 are currently pending. Claims 1, 2 and 5 have been amended. Support for the amended claims is found throughout the specification. In particular, "spot or streak" is supported on page 6, line 14 and "nickel-antibody conjugate" is supported on page 11, first full paragraph. The amendment of claim 5 is to explicitly recite the full designation of an acronym well known in the art. New Claims 6-10 are submitted. Support for the new claims can be found throughout the specification, for example in the original claims, page 5, lines 9-11 and page 10, lines 18-19. No new matter has been added.

II Non-Obviousness

The Examiner has rejected Claims 1 and 2 under 35 USC 103(a) as being obvious over the combined teaching of Mroczkowski et al (A) (US 5,284,748), Mroczkowski et al (B) (US 4,794,089), Harlow (Antibodies a Laboratory Manual, 1988, pages 563-566 and 579-582) and Herbrink et al (Journal of Immunological Methods 48:293-298). Furthermore, Claims 3 and 4 are rejected under 35 USC 103(a) as being obvious over the combined teaching of Mroczkowski et al (A) (US 5,284,748), Mroczkowski et al (B) (US 4,794,089), Harlow (Antibodies a Laboratory Manual, 1988, pages 563-566 and 579-582), Herbrink et al (Journal of Immunological Methods 48:293-298) and Bartlett (US 5,679,709).

The rule according to MPEP 2143 is that to establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The pending Claims have been amended to recite the use of a nickel-antibody conjugate. None of the cited references teach this limitation. While Mroczkowski A disclose the use of conductive particles, preferably gold, silver, or platinum (column 9, lines 24-26), bound to antibodies, there is no disclosure of nickel. The applicant has discovered through empirical experimentation that nickel is a preferred, low-cost material to use in the claimed invention. This is supported on page 9, lines 19-20, wherein 5 metals are tested, with nickel being used for all further experiments, and on paragraph 14, last sentence, wherein preference for nickel is reiterated. Therefore, as all limitations of the claims have not been taught by the cited references, there is no *prima facie* case of obviousness and the rejection should be withdrawn.

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New Claims 6-9 are drawn to methods performed using a hydrophobic substrate. An advantage of this substrate is that it allows for colorimetric assays to be performed on the same preparation of samples on which current was measured. Indeed, the inventors have found that spotting and/or streaking protein solutions on a hydrophobic substrate, such as PVDF, results in concentrated and well-defined spots and streaks, because the protein solutions do not enter into the substrate and spread out. Thus, this non-obvious use of a hydrophobic substrate facilitates both protein spotting in a microarray format and parallel colorimetric and conductance analysis. None of the prior art of record teaches a hydrophobic substrate. Mroczkowski A teach-away from a hydrophobic substrate, stating (Col. 10, lines 14-27) that layer 45A or 45B (on which proteins are added) are formed from *inter alia* hydrophilic organic polymers, such as mylar, polystyrenes and nylons.

III Compliance with 35 USC 112

The Examiner has rejected Claim 5 [*sic* 4] under 35 USC 112 as being indefinite for reciting an acronym without its full designation. Claim 5 has been amended to comply.


CONCLUSION

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of all outstanding rejections are respectfully requested. Allowance of the claims at an early date is solicited. If any points remain that can be resolved by telephone, the Examiner is invited to contact the undersigned at the below-given telephone number.

Respectfully submitted,

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